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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/071,326

Applicant(s)

HANNUKSELA, MISKA

Examiner

Kyung H. Shin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 7, 11, 13, 15, 17 - 20, 22 - 84 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 7, 11, 13, 15, 17 - 20, 22 - 84 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 1 – 7, 11, 13, 15, 17 – 20, 22 - 84 are pending. Claims 1, 18, 22, 51, 63, 72 have been amended. Claims 8, 9, 10, 12, 14, 16, 21, 84 have been canceled. Claims 24 - 84 were added as new claims in RCE on 8/7/06. Independent claims are 1, 18, 22, 51, 63, 72.

### ***Response to Remarks***

2. Applicant's arguments filed 5/4/2007 have been fully considered but they are not persuasive.

2.1 Applicant argues that the referenced prior art does not disclose client server parameter transfer. (see Remarks Pages 26-28)

The transfer between program modules utilizing the call function passes a set of parameters between the program modules. The program modules can reside within the client program and the other program module can reside within the server system. The call functions as a two way transfer mechanism. The call initiator can send parameters or receive parameters. The server can receive parameters from the client device via the call function.

2.2 Applicant argues that the referenced prior art does not disclose, pre-encoded media streams. (see Remarks Page 28)

The Gunaseelan prior art discloses the storage of media assets, access to media storage from network distributed sources such as content providers, and obtaining content in packetized units (encoded) for delivery to clients. (see Gunaseelan paragraph [0024], lines 24-29; paragraph [0025], lines 1-5: encoded media assets prepared for for network transmission to clients)

2.3 Applicant argues that the referenced prior art does not disclose, parameter update during session. (see Remarks Page 29)

The Gunaseelan prior art disclose that for variable rate transfers the buffer size is computer based on a three second window. (see Gunasellan paragraph [0045], lines 3-6: update parameter)

2.4 Applicant argues that the referenced prior art does not disclose, client buffers to control delay variations. (see Remarks Page 25)

The Gunaseelan prior art discloses client side buffers. (see Gunaseelan paragraph [0039], lines 1-3: buffers (i.e. pre-read buffer and other buffer(s)) utilized to smooth out performance during media data playback) The claim limitation indicates the buffers are used to control delay variations. The Gunaseelan prior art discloses the buffers are utilized to reduce jitters, which can be caused by delay variations among other causes. The usage of the buffers is for equivalent functions.

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2.5 Protocol headers are removed from network packets as output network packets transverse the protocol stack as part of standard packet-based network communications. Protocol headers are added to network packets as input network packets transverse the protocol stack as part of standard packet-based network communications. The Gunaseelan prior art discloses network communications for the transfer of streamed media. (see Gunaseelan paragraph [0023], lines 1-3: network communications)

2.6 The examiner has considered the applicant's remarks concerning a method of improving the playback of streamed media on a client device by overcoming problems caused by variations in the transmission delay of packets due to network operation and variations in specific server encoding delays. Applicant's arguments have thus been fully analyzed and considered but they are not persuasive.

After an additional analysis of the applicant's invention, remarks, and a search of the available prior art, it was determined that the current set of prior art consisting of **Gunaseelan (20020097750)** discloses the applicant's invention including disclosures in Remarks dated May 4, 2007.

***Claim Rejection – 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1 - 7, 11, 13, 15, 18, and 22 - 83** are rejected under 35 U.S.C. 102(e) as being anticipated by **Gunaseelan et al.** (US PG PUB Application No. **20020097750**).

**Regarding Claim 1**, Gunaseelan discloses a method of streaming media data by

transmitting a plurality of data packets as a data packet stream over a network from a source server to a client device (see Gunaseelan paragraph [0005], lines 3-9: media content distribution system utilizing packet data)

wherein the client device comprising a source decoder (see Gunaseelan paragraph [0023], lines 8-16; paragraph [0039], lines 9-12: processing of media content includes decoding), and

a pre-decoder buffer (see Gunaseelan paragraph [0039], lines 3-7; paragraph [0040], lines 1-7: pre-read (i.e. pre-decoder) buffer utilized, time (i.e. timestamp) and buffer size variable parameters utilized); (see Gunaseelan paragraph [0039], lines 4-6: pre-read (i.e. pre-decode) buffer utilized),

removing protocol headers from a data packet received at the client device to retrieve media data; (see Gunaseelan paragraph [0023], lines 1-3; paragraph [0025], lines 5-10: protocol headers removed as part of standard network communications on input network packets)

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buffering the media data in the pre decoder buffer of the client device in accordance with a buffering algorithm and operating the source server to verify that the data packet stream transmitted from the source server to the client device complies with the buffering algorithm, behavior of the buffering algorithm being affected by a pre decoder initial buffering time and a minimum pre decoder buffer size, the minimum pre decoder buffer size corresponding to a minimum size of the pre decoder buffer required to provide substantially correct playback of the media data at the client device when the data packet stream is transmitted over a constant delay reliable transmission network. (see Gunaseelan paragraph [0026], lines 7-9; paragraph [0026], lines 11-14; paragraph [0040], lines 1-7: variable timing and buffer size parameters, dynamically adjust buffer size when required; paragraph [0006], lines 6-11; paragraph [0049], lines 1-4; paragraph [0040], lines 1-7: adjust buffer size and timing parameters)

**Regarding Claim 2**, Gunaseelan discloses a method of claim 1, comprising submitting a request from the client device to the source server to set at least one of the pre-decoder initial buffering time and the pre-decoder buffer size (see Gunaseelan paragraph [0026], lines 7-9; paragraph [0026], lines 11-14: variable timing and buffer size parameters; paragraph [0040], lines 1-7: buffer size variable, input by client to server). (see Gunaseelan paragraph [0043], lines 7-11; paragraph [0039], lines 3-7: server returns buffer size parameter (i.e. pre-decoder buffer size) to be set by client)

**Regarding Claim 3**, Gunaseelan discloses the method of claim 1, comprising defining a default pre-decoder initial buffering time and a default minimum pre-decoder buffer size. (see Gunaseelan paragraph [0040], lines 1-7: client defines parameters (i.e. client based parameters (i.e. time and size) defined as default (i.e. not from server) or original parameters))

**Regarding Claim 4**, Gunaseelan discloses the method of claim 3, comprising signaling at least one of the default pre-decoder initial buffering time and the default minimum pre-decoder buffer size from the client device to the source server. (see Gunaseelan paragraph [0040], lines 1-7; paragraph [0026], lines 7-9: server queries client for variable parameters (i.e. time and size))

**Regarding Claim 5**, Gunaseelan discloses the method of claim 1, comprising adjusting the pre-decoder initial buffering time in the client device responsive to an indication of a required pre-decoder initial buffering time received from the source server. (see Gunaseelan paragraph [0040], lines 1-7: client request for parameters (i.e. dynamically, when required not in advance) ; paragraph [0043], lines 7-11: client sets parameters (i.e. time and size) returned from server)

**Regarding Claim 6**, Gunaseelan discloses the method of claim 1, comprising adjusting the pre-decoder buffer size in (see Gunaseelan paragraph [0040], lines 1-7: client



request for parameters (i.e. dynamically, when required not in advance), required pre-decoder buffer size received from the source server; paragraph [0006], lines 6-11; paragraph [0049], lines 1-4: adjustment to (i.e. buffer size parameter, time parameter based on buffer size) parameters based on comparison of streaming media content delivery)

**Regarding Claim 7**, Gunaseelan discloses the method of claim 1, comprising providing the source server with a plurality of pre-encoded media stream representative of the same media content and signaling the client device to indicate at least one of a pre-decoder initial buffering time and a pre-decoder buffer size required in the client to ensure correct playback of each available pre-encoded media stream. (see Gunaseelan paragraph [0023], lines 4-8; paragraph [0023], lines 24-26 paragraph [0039], lines 3-7: plurality of media data, size parameter for pre-read (i.e. pre-decoder) buffer)

**Regarding Claim 11**, Gunaseelan discloses the method of claim 1, comprising adjusting at least one of the pre-decoder initial buffering time and the pre-decoder buffer size in the client device responsive to a change in required pre-decoder buffer parameters signaled by the source server during a streaming session. (see Gunaseelan paragraph [0040], lines 1-7; paragraph [0043], lines 7-11; paragraph [0006], lines 6-11: time (i.e. timestamp) parameter adjusted by server, parameters sent from server to client)

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**Regarding Claim 13**, Gunaseelan discloses the method of claim 1, comprising adjusting the transmission times of data packets from the source server to the client device in order to ensure that the transmitted data packet stream does not exceed the buffering capabilities of the pre-decode buffer in the client device. (see Gunaseelan paragraph [0040], lines 1-7; paragraph [0006], lines 6-11: time (i.e. timestamp) parameter adjusted based on buffering parameters)

**Regarding Claim 15**, Gunaseelan discloses the method of claim 1, comprising implementing a post-decoder buffer in the client device to absorb decoding-related delay variations. (see Gunaseelan paragraph [0039], lines 1-3: buffers (i.e. pre-read buffer and other buffer(s)) utilized to smooth out performance during media data playback)

**Regarding Claim 18**, Gunaseelan discloses a system for streaming media data by transmitting a plurality of data packets containing the media data, the system comprises:

- a) a source server hosting the media data; (see Gunaseelan paragraph [0023], lines 4-10; server system for media data delivery)
- b) a network serving as a transmission medium for the data packets containing the media data; (see Gunaseelan paragraph [0023], lines 1-3: network communications utilized for distribution system for media data) and

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- c) a client device capable of playing back the media data recovered from the data packets (see Gunaseelan paragraph [0028], lines 8-12: client plays delivered media content (i.e. playing back media data)) the client device comprising:
  - a) a source decoder; and a pre-decoder buffer coupled to the source decoder for buffering the media data temporarily prior to decoding into an uncompressed data format in the source decoder; (see Gunaseelan paragraph [0039], lines 3-7: pre-read (i.e. pre-decoder) buffer, time (i.e. timestamp) parameter based on buffer size)
  - b) wherein the client device is arranged to remove protocol headers from a data packet received at the client device to retrieve media data (see Gunaseelan paragraph [0023], lines 1-3; paragraph [0025], lines 5-10: protocol headers removed as part of standard network communications on input network packets) and to buffer the media data in the pre decoder buffer in accordance with a buffering algorithm and the source server is arranged to verify that the data packet stream transmitted from the source server to the client device complies with the buffering algorithm, behavior of the buffering algorithm being affected by a pre decoder initial buffering time and a minimum pre decoder buffer size, the minimum pre decoder buffer size corresponding to a minimum size of the pre decoder buffer required to provide substantial correct playback of the media data at the client device; (see Gunaseelan paragraph [0023], lines 8-16; paragraph [0039], lines 9-12: decode capability for delivered media data; paragraph [0026], lines 7-9; paragraph [0026], lines 11-

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14; paragraph [0040], lines 1-7: variable timing and buffer size parameters, dynamically adjust buffer size when required; paragraph [0006], lines 6-11; paragraph [0049], lines 1-4; paragraph [0040], lines 1-7: adjust buffer size and timing parameters)

**Regarding Claim 22**, Gunaseelan discloses a client device for receiving streaming media data, the media data being received at a client device in a plurality of data packets transmitted as a data packet stream over a network from a source server, the client device comprising:

- a) a source decoder; and a pre-decoder buffer coupled to the source decoder for buffering the media data temporarily prior to decoding into an uncompressed data format in the source decoder; (see Gunaseelan paragraph [0039], lines 3-7: pre-read (i.e. pre-decoder) buffer)
- b) wherein the client device is arranged to remove protocol headers from a data packet received at the client device to retrieve media data (see Gunaseelan paragraph [0023], lines 1-3; paragraph [0025], lines 5-10: protocol headers removed as part of standard network communications on input network packets) and to buffer the media data in the pre decoder buffer in accordance with a buffering algorithm and the source server is arranged to verify that the data packet stream transmitted from the source server to the client device complies with the buffering algorithm, behavior of the buffering algorithm being affected by a pre decoder initial buffering time and a minimum pre decoder buffer size, the

minimum pre decoder buffer size corresponding to a minimum size of the pre decoder of the pre decoder buffer required to provide substantial correct playback of the media data at the client device; (see Gunaseelan paragraph [0026], lines 7-9; paragraph [0026], lines 11-14; paragraph [0040], lines 1-7: variable timing and buffer size parameters, dynamically adjust buffer size when required; paragraph [0006], lines 6-11; paragraph [0049], lines 1-4; paragraph [0040], lines 1-7: adjust buffer size and timing parameters)

**Regarding Claims 23, 29, 42,** Gunaseelan discloses the client device of claim 22, wherein the client device is selected from a group comprising: a wireless terminal, a desktop computer, and a laptop computer and a set top box. (see Gunaseelan paragraph [0024], lines 7-9: client device, desktop computer or other types of computer systems)

**Regarding Claims 24, 30, 52, 64, 73,** Gunaseelan discloses a method according to claim 1, further comprising:

- a) sending signaling from the client device to the source server to indicate at least one of a pre decoder initial buffering time and a minimum pre decoder buffer size; (see Gunaseelan paragraph [0026], lines 7-9; paragraph [0026], lines 11-14: variable timing and buffer size parameters; paragraph [0040], lines 1-7: buffer size variable, input by client to server) and

- b) operating the server to verify the transmitted data packet stream according to the buffering algorithm, using the signaled pre decoder initial buffering time and/or minimum pre decoder buffer size. (see Gunaseelan paragraph [0026], lines 7-9; paragraph [0026], lines 11-14; paragraph [0040], lines 1-7: variable timing and buffer size parameters, dynamically adjust buffer size when required)

**Regarding Claims 25, 33, 55, 76,** Gunaseelan discloses a method according to claim 3, wherein the default pre decoder initial buffering time and default minimum pre decoder buffer size are defined implicitly. (see Gunaseelan paragraph [0040], lines 1-7: client defines parameters (i.e. client based parameters (i.e. time and size) defined as default (i.e. not from server) or original parameters))

**Regarding Claims 26, 34, 46,** Gunaseelan discloses a method according to claim 25, comprising sending signaling from the client device to the source server to indicate the client device's pre decoder buffering capabilities to the source server if these are superior to those defined by the default values. (see Gunaseelan paragraph [0043], lines 7-11; paragraph [0039], lines 3-7: server returns buffer size parameter (i.e. pre-decoder buffer size) to be set by client)

**Regarding Claims 27, 35, 77,** Gunaseelan discloses a method according to claim 1, wherein the source server retrieves pre decoder buffering capabilities for the client device from a capability server. (see Gunaseelan paragraph [0043], lines 7-11;

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paragraph [0039], lines 3-7: server returns buffer size parameter (i.e. pre-decoder buffer size) to be set by client)

**Regarding Claims 28, 41, 62**, Gunaseelan discloses a method according to claim 1, wherein the source server adjusts the way in which the media data is encoded and packetized in order to ensure that the transmitted data packet stream does not exceed the buffering capabilities of the predecoder buffer in the client device. (see Gunaseelan paragraph [0026], lines 7-9; paragraph [0026], lines 11-14; paragraph [0040], lines 1-7: variable timing and buffer size parameters, dynamically adjust buffer size when required so that stream does not exceed capabilities)

**Regarding Claims 31, 43, 53, 74**, Gunaseelan discloses a system according to claim 18, wherein a default pre decoder initial buffering time and a default minimum pre decoder buffer size are defined for the pre decoder buffer of the client device and the source server is arranged to verify the transmitted data packet stream according to the buffering algorithm using the default values. (see Gunaseelan paragraph [0049], lines 1-4: comparison of delivery times utilized to verify performance parameters (i.e. time, size))

**Regarding Claims 32, 45**, Gunaseelan discloses a system according to claim 31, wherein the client device is arranged to signal at least one of the default pre decoder initial buffering time and the default minimum pre decoder buffer size to the source

server in connection with setting up a streaming session with the source server. (see Gunaseelan paragraph [0026], lines 7-9; paragraph [0026], lines 11-14: variable timing and buffer size parameters; paragraph [0040], lines 1-7: buffer size variable, input by client to server)

**Regarding Claims 36, 47,** Gunaseelan discloses a system according to claim 18, wherein the client device is arranged to adjust its pre decoder initial buffering time responsive to an indication of a required pre decoder initial buffering time received from the source server. (see Gunaseelan paragraph [0040], lines 1-7: client request for parameters (i.e. dynamically, when required not in advance) ; paragraph [0043], lines 7-11: client sets parameters (i.e. time and size) returned from server)

**Regarding Claims 37, 48, 69,** Gunaseelan discloses a system according to claim 18, wherein the client device is arranged to adjust its pre decoder buffer size or initial buffering time responsive to an indication of a required pre decoder buffer size received from the source server. (see Gunaseelan paragraph [0040], lines 1-7: client request for parameters (i.e. dynamically, when required not in advance), required pre-decoder buffer size received from the source server; paragraph [0006], lines 6-11; paragraph [0049], lines 1-4: adjustment to (i.e. buffer size parameter, time parameter based on buffer size) parameters based on comparison of streaming media content delivery)



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**Regarding Claims 38, 80,** Gunaseelan discloses a system according to claim 18, wherein the source server is provided with a plurality of different pre encoded media streams representative of the same media content, and is arranged to signal at least one of a pre decoder initial buffering time and a pre decoder buffer size required in the client device to ensure correct play back of each available pre encoded media stream. (see Gunaseelan paragraph [0039], lines 3-7: pre-read (i.e. pre-decoder) buffer; paragraph [0040], lines 1-7: adjust parameters (i.e. time, size) for playback performance improvement)

**Regarding Claims 39, 82,** Gunaseelan discloses a system according to claim 18, wherein the client device is arranged to adjust at least one of its pre decoder initial buffering time and its pre decoder buffer size responsive to a change in required pre decoder buffer parameters signaled by the source server during a streaming session. (see Gunaseelan paragraph [0006], lines 6-11: paragraph [0040], lines 1-7: adjust parameters (i.e. time, size) for playback performance improvement)

**Regarding Claims 40, 61, 83,** Gunaseelan discloses a system according to claim 18, wherein the source server is arranged to adjust the transmission times of data packets from the source server to the client device in order to ensure that the transmitted data packet stream does not exceed the buffering capabilities of the pre decoder buffer in the client device. (see Gunaseelan paragraph [0041], lines 14-23: adjustment parameters for buffer processing are stored in server)

**Regarding Claim 44**, Gunaseelan discloses a client device according to claim 22, wherein a default predecoder initial buffering time and a default minimum pre decoder buffer size are defined for the pre decoder buffer of the client device. (see Gunaseelan paragraph [0040], lines 1-7: client defines parameters (i.e. client based parameters (i.e. time and size) defined as default (i.e. not from server) or original parameters))

**Regarding Claims 49, 70**, Gunaseelan discloses a client device according to claim 22, wherein the client device is arranged to:

- a) receive signaling from the source server indicative of at least one of a predecoder initial buffering time and a pre decoder buffer size required to provide correct playback of each of a number of different pre encoded media streams representative of the same media content; (see Gunaseelan paragraph [0043], lines 7-11: client request for delivery of media data (i.e. establish a connection), parameters transmitted from server to client)
- b) select one of the different pre encoded media streams for playback at the client device; and adjust its pre decoder initial buffering time and pre decoder buffer size according to the requirements of the selected media stream. (see Gunaseelan paragraph [0039], lines 3-7: parameter, size of pre-read (i.e. pre-decoder) buffer ; paragraph [0040], lines 1-7; paragraph [0026], lines 7-9; paragraph [0026], lines 11-14: variable timing and variable buffer size parameters)

**Regarding Claims 50, 71,** Gunaseelan discloses a client device according to claim 22, wherein the client device is arranged to adjust at least one of its pre decoder initial buffering time and its pre decoder buffer size responsive to a change in required pre decoder buffer parameters signaled by the source server during a streaming session. (see Gunaseelan paragraph [0040], lines 1-7; paragraph [0006], lines 6-11: time (i.e. timestamp) parameter adjusted based on buffering parameters)

**Regarding Claims 51, 72,** Gunaseelan discloses a server for streaming media data by transmitting a plurality of data packets as a data packet stream to a client device, the data packets formed by adding protocol headers to media data (see Gunaseelan paragraph [0023], lines 1-3; paragraph [0025], lines 5-10: protocol headers added as part of standard network communications on output network packets) and to the client device comprising a source decoder and a pre decoder buffer for buffering the media data temporarily before decoding into an uncompressed data format in the source decoder of the client device (see Gunaseelan paragraph [0023], lines 4-10; server system for media data delivery; paragraph [0023], lines 1-3: network communications utilized for distribution system for media data), wherein the server is arranged to verify that the data packet stream transmitted from the server to the client device complies with a buffering algorithm (see Gunaseelan paragraph [0041], lines 14-23: adjustment parameters for buffer processing are stored in server) used in the client device to buffer the media data in the pre decoder buffer, behavior of the buffering algorithm being

affected by a pre decoder initial buffering time and a minimum pre decoder buffer size, the minimum pre decoder buffer size corresponding to a minimum size of the predecoder buffer required to provide substantially correct playback of the media data at the client device (see Gunaseelan paragraph [0006], lines 6-11: paragraph [0040], lines 1-7: adjust parameters (i.e. time, size) for playback performance improvement); paragraph [0039], lines 1-3: buffers (i.e. pre-read buffer and other buffer(s)) utilized to smooth out performance during media data playback).

**Regarding Claim 54**, Gunaseelan discloses a server according to claim 53, wherein the server is arranged to receive signaling indicative of at least one of a default pre decoder initial buffering time and a default minimum pre decoder buffer size in connection with setting up a streaming session. (see Gunaseelan paragraph [0040], lines 1-7: client defines parameters (i.e. client based parameters (i.e. time and size) defined as default (i.e. not from server) or original parameters); paragraph [0043], lines 7-11: client request for delivery of media data (i.e. establish a connection), parameters transmitted from server to client)

**Regarding Claims 57, 58, 78, 79**, Gunaseelan discloses a server according to claim 51, wherein the server is arranged to provide an indication of a required pre decoder initial buffering time or pre decoder buffer size to the client device. (see Gunaseelan paragraph [0040], lines 1-7: client defines parameters (i.e. client based parameters (i.e. time and size) defined as default (i.e. not from server) or original parameters))

**Regarding Claim 59**, Gunaseelan discloses a server according to claim 51, wherein the server is provided with a plurality of different pre encoded media streams representative of the same media content, and is arranged to signal at least one of a pre decoder initial buffering time and a pre decoder buffer size required in the client device to ensure correct play back of each available pre encoded media stream. (see Gunaseelan paragraph [0040], lines 1-7: client request for parameters (i.e. dynamically, when required not in advance), required pre-decoder buffer size received from the source server; paragraph [0006], lines 6-11; paragraph [0049], lines 1-4: adjustment to (i.e. buffer size parameter, time parameter based on buffer size) parameters)

**Regarding Claims 60, 81**, Gunaseelan discloses a server according to claim 51, wherein the server is arranged to signal a change in required pre decoder buffer parameters to the client device during a streaming session. (see Gunaseelan paragraph [0040], lines 1-7; paragraph [0006], lines 6-11: time (i.e. timestamp) parameter adjusted based on buffering parameters)

**Regarding Claim 63**, Gunaseelan discloses a server for streaming media data by transmitting a plurality of data packets as a data packet stream to a client device, the client device comprising a source decoder and a pre decoder buffer for remove protocol headers from a data packet received at the client device to retrieve media data (see Gunaseelan paragraph [0023], lines 1-3; paragraph [0025], lines 5-10: protocol headers

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removed as part of standard network communications on input network packets) and to buffering the media data temporarily before decoding into an uncompressed data format in the source decoder of the client device (see Gunaseelan paragraph [0023], lines 4-10; server system for media data delivery; paragraph [0023], lines 1-3: network communications utilized for distribution system for media data), wherein the server is arranged to verify that the data packet stream transmitted from the server to the client device complies with a buffering algorithm (see Gunaseelan paragraph [0041], lines 14-23: adjustment parameters for buffer processing are stored in server) used in the client device to buffer the media data in the pre decoder buffer, behavior of the buffering algorithm being affected by a pre decoder initial buffering time and a minimum pre decoder buffer size, the minimum pre decoder buffer size corresponding to a minimum size of the predecoder buffer required to provide substantially correct playback of the media data at the client device (see Gunaseelan paragraph [0006], lines 6-11: paragraph [0040], lines 1-7: adjust parameters (i.e. time, size) for playback performance improvement); paragraph [0039], lines 1-3: buffers (i.e. pre-read buffer and other buffer(s)) utilized to smooth out performance during media data playback).

**Regarding Claim 65**, Gunaseelan discloses a method according to claim 63, further comprising defining a default pre decoder initial buffering time and a default minimum pre decoder buffer size for the pre decoder buffer of the client device. (see Gunaseelan paragraph [0040], lines 1-7: client defines parameters (i.e. client based parameters (i.e. time and size) defined as default (i.e. not from server) or original parameters))

**Regarding Claim 66**, Gunaseelan discloses a method according to claim 65, wherein the client device signals at least one of the default pre decoder initial buffering time and the default minimum predecoder buffer size to the server in connection with setting up a streaming session with the server. (see Gunaseelan paragraph [0043], lines 7-11: client request for delivery of media data (i.e. establish a connection), parameters transmitted from server to client)

**Regarding Claim 67**, Gunaseelan discloses a method according to claim 65, wherein the client device signals its pre decoder buffering capabilities to the server if these are superior to those defined by the default values. (see Gunaseelan paragraph [0043], lines 7-11; paragraph [0039], lines 3-7: server returns buffer size parameter (i.e. pre-decoder buffer size) to be set by client)

**Regarding Claim 68**, Gunaseelan discloses a method according to claim 63, wherein the client device adjusts its pre decoder initial buffering time responsive to an indication of a required pre decoder initial buffering time received from the server. (see Gunaseelan paragraph [0040], lines 1-7: client request for parameters (i.e. dynamically, when required not in advance) ; paragraph [0043], lines 7-11: client sets parameters (i.e. time and size) returned from server)

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**Regarding Claim 75**, Gunaseelan discloses a method according to claim 74, wherein the server receives signaling indicative of at least one of a default pre decoder initial buffering time and a default minimum pre decoder buffer size in connection with setting up a streaming session. (see Gunaseelan paragraph [0040], lines 1-7: client defines parameters (i.e. client based parameters (i.e. time and size) defined as default (i.e. not from server) or original parameters))

***Claim Rejection – 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 17, 19, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gunaseelan et al.** (US PG PUB No. 2002/0097750) in view of **West et al.** (US Patent No. 6,842,433).

**Regarding Claim 17**, Gunaseelan discloses media data transmitted to a wireless client device and the network includes a wireless network. (see Gunaseelan paragraph [0005], lines 3-10; paragraph [0025], lines 10-12: media content (i.e. media data) distribution system utilizing wireless communications) Gunaseelan does not



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specifically disclose wireless communications utilizing GPRS. However, West discloses the method of claim 1, wherein the network comprises a wireless network, the wireless network being selected from a group comprising: a GPRS (General Packet Radio Service) wireless network and a UMTS (Universal Mobile Telecommunications System). (see West col. 5, lines 49-52; col. 36, lines 10-16: wireless communications system (i.e. utilizing GPRS and other wireless protocols such as UMTS) for distribution of media data (i.e. audio, video))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gunaseelan to utilize wireless communications for the distribution of media content as taught by West. One of ordinary skill in the art would be motivated to employ West in order to increase the communications range of conventional portable computing devices and obtain the benefits from improvements in the ability to access information within a wireless communications environment. (see West col. 1, lines 26-29; col. 2, lines 37-39)

**Regarding Claim 19**, Gunaseelan discloses a content distribution system utilizing wireless communications. (see Gunaseelan paragraph [0005], lines 3-10; paragraph [0025], lines 10-12: content distribution system, wireless communications) Gunaseelan does not specifically disclose a wireless communications utilizing the GPRS. However, West discloses the system of claim 18, wherein the network comprises a wireless network selected from a group comprising: a GPRS (General Packet Radio Service) wireless network and a UMTS (Universal Mobile Telecommunications System) (see

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West col. 5, lines 49-52; col. 36, lines 10-16: wireless communications system (i.e. utilizing GPRS and other wireless protocols such as UMTS) for distribution of media data (i.e. audio, video))

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gunaseelan to utilize wireless communications for the distribution of media content as taught by West. One of ordinary skill in the art would be motivated to employ West in order to increase the communications range of conventional portable computing devices and obtain the benefits from improvements in the ability to access information within a wireless communications environment. (see West col. 1, lines 26-29; col. 2, lines 37-39)

**Regarding Claim 20**, Gunaseelan discloses a content distribution system utilizing wireless communications. (see Gunaseelan paragraph [0005], lines 3-10; paragraph [0025], lines 10-12: content distribution system, wireless communications) Gunaseelan does not specifically disclose a wireless device for packet receipt. However, West discloses the system of claim 19, wherein the client device is a wireless terminal compatible for data packet use by the wireless system. (see West col. 5, lines 49-52; col. 38, lines 22-29: wireless communications system for distribution of media data (i.e. audio, video) to a wireless device)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gunaseelan to utilize wireless communications for the distribution of media content as taught by West. One of ordinary skill in the art would be

motivated to employ West in order to increase the communications range of conventional portable computing devices and obtain the benefits from improvements in the ability to access information within a wireless communications environment. (see West col. 1, lines 26-29; col. 2, lines 37-39)

### ***Conclusion***

**7. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


**8.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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